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EXRAND-M-40  
4 February 1971

COMIREX SUBCOMMITTEE  
For  
EXPLOITATION RESEARCH AND DEVELOPMENT

Minutes of Meeting Held in Beige Room  
0900-1200, Wednesday, 20 January 1971

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The Chairman welcomed the EXRAND Members and Observers. He noted that this was the first official meeting for [ ] of NRTSC.

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1. Special Briefing.

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[ ] introduced [ ] of the Research and Engineering Division, Technical Services Group, NPIC, who briefed on the Optical and Digital Image Manipulation projects underway at NPIC. A synopsis of the briefing is attached.

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GROUP 1: EXCLUDED FROM  
AUTOMATIC DOWNGRADING  
AND DECLASSIFICATION

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2. Approval of Minutes.

UNCLASSIFIED

With the exception of a minor correction, the minutes of the previous meeting were approved.

3. Announcements.

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a.  provided a handout showing the proposed schedule of the trip to Wright-Patterson Air Force Base. The date has been established as 12, 13, and 14 April. Additional information will be provided by the Executive Secretary prior to the meeting in March.

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b.  stated that there are some difficulties with the T&E aspect of the 1540 light tables and that some additional time may be needed to bring the first delivery group up to performance standards. This is not a serious situation, but there is some slippage in the schedule at least for the first group of deliveries.

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c.  commented on the Automatic Target Indexing Device now under test and evaluation and stated the capabilities of the contractor.

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d.  mentioned that he had not received return comments on several beneficial suggestions that he had sent to members of EXRAND.

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f. With the planned decommissioning of  and the transfer of its functions to the 548th in Hawaii, three Fultron processors will be returned to the national equipment reserve (NER). It is possible that these processors could be made available to some specific exploitation organizations, if they could show a need. These machines are compatible

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with the new viscous duping of SO-192, provided that a viscous modular cabinet is purchased to convert the Fultron to viscous.

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g. [ ] discussed the very high cost to support a color acquisition/exploitation imagery system. The facilities and equipment needed, for example, at Eastman Kodak and Westover alone would cost about

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[ ] He mentioned that even NSA's program would call for very high cost to the nation. Currently a study is underway concerning utilization of the large new Special Projects Building in Rochester, considering its conversion to a color facility for color requirements for the nation. A viable national color program concentrating all color processing requirements in one place appears now to be the only way at this time for the government to economize. This will provide a center which can be tasked by the Community. This is a cost study only and no decision has been made as yet.

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h. [ ] also mentioned the possibility that the SENIOR LANCE program could bring a processing requirement to the Community and that we should remain alert to this program.

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i. [ ] announced the approval of the EXRAND Objectives by COMIREX. A discussion took place concerning the security level of the paper. The EXRAND members concluded that a sanitized SECRET level version would be necessary and the Executive Secretary was tasked to obtain the details from the COMIREX Security Officer in order to produce a SECRET level paper. [ ] of the Technical Task Team will stand by for this information in order to produce a revised Objectives list so that it can be given wide dissemination.

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#### 4. Old Business.

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a. [ ] reported on the Consolidated R&D Project List by presenting an analysis of that list. He also discussed certain projects in the list to some length. He stated that there was a fine, positive attitude of all team members during the course of the study. They found that this was a great opportunity to present and receive information concerning R&D programs. There has been no other similar coordination within the R&D Community since the disestablishment of ISCIG. The community represented by EXRAND provides the only coordinating medium. [ ]

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reviewed generally the projects listed and presented a verbal analysis of several of them. He also pointed up several projects which may have a great impact in the Community. He recommended wider distribution of the Consolidated R&D Project List and recommended that the distribution be the same as the NPIC Equipment Summary. EXRAND members agreed with [ ] comments and directed the Executive Secretary to acquire an up-to-date distribution list. [ ] reported that the Consolidated R&D List had been distributed to members a week preceding this meeting and that the members should take another week to review the projects. Comments on and corrections to the List should be provided to [ ] directly before 31 January. The EXRAND members will be expected to review the corrections and approve the List in order to pave the way for its wide distribution and presentation to COMIREX.

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b. [ ] recommended that the NRO representative take under consideration the designation of someone to be responsible to coordinate the CCB projects into the Consolidated R&D Project List. This had not yet been done. The EXRAND members concurred and [ ] will see that there is an input of CCB projects of interest to the EXRAND Community. It was also recommended by the committee that Mr. Newell modify his paper somewhat covering the analysis of the Technical Task Team deliberations and that it be prepared as a covering letter forwarding the Consolidated R&D Project List to COMIREX.

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c. The Executive Secretary presented a plan for EXRAND activities for 1971. The plan covered proposed special briefings, demonstrations, and visits to be undertaken by EXRAND. He explained that the papers were not all inclusive and should be expanded upon by the members. He also expressed a number of thoughts to take into consideration for the new year concerning the responsibilities of EXRAND to the Community.

(1) In preparing the schedule of activities and deliberating and discussing matters coming before EXRAND, we should constantly refer to the new EXRAND Objectives for guidance.

(2) EXRAND should deliberate in a "non-political" atmosphere upon the future exploitation imagery systems and provide the advice and guidance to each represented segment of the Community. They should know early-on of the planned acquisition systems.

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(3) EXRAND is also a repository for obtaining wise council on R&D matters for the Exploitation Community. It is a body which recognizes and anticipates changes, then acts when the dynamic nature of R&D signals these changes.

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The Executive Secretary will now compile a revised schedule for briefings, demonstrations, and visits and present them at the 17 February meeting. It is noted here that a number of the briefings may not be available until later in the year and even then we may receive changes in dates and schedules. A copy of the proposed schedules for EXRAND is attached.

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Executive Secretary, EXRAND

## Attachments:

1. Briefing Notes
2. Proposed EXRAND Schedules

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ATTACHMENT 1 to

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EXRAND BRIEFINGOptical & Digital Image Manipulation

1. The status of the NPIC R&D program in image manipulation was reviewed and examples of improved manipulated imagery were shown.

2. The digital approach, supported by ARPA and NPIC and performed at the University of California, San Diego, is the more flexible but is limited to small (few millimeters square) image areas and large computers. Current investigations involve operational imagery with very encouraging results. Work in 1971 will be restricted mainly to determining the applicability of the system to operational imagery.

3. Optical manipulation, performed at NPIC with contractor support has succeeded in improving imagery at higher spatial frequencies than heretofore demonstrated anywhere using high pass spatial filtering. Other types of filtration are also being investigated. While not as flexible as the digital approach in some respects, optical processing offers large area improvement at the speed of light for many useful operations.

4. In the future a hybrid system (optical and digital) is anticipated wherein the operator will select the technique that meets his requirements.

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PROSPECTIVE VISITS

March

17 March -- Visit the Advanced Technology Branch, RED/TSG/NPIC after the EXRAND meeting. Luncheon at the Navy Officers Mess. Tour of Laboratory, 1330-1500.

April

12-14 April -- Wright-Patterson AFB, Dayton, Ohio

Visit: FTD  
Avionics Laboratory  
Recon Central

May

Visit RADC, Rome, New York. R&D facilities and a presentation on current and future R&D projects related to EXRAND.

July

Visit Eastman Kodak. Processing facilities with regard to exploitation (Between buckets, limited number of visitors.)

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August

Visit SAMSO (Los Angeles), Vandenberg AFB, and STC/Lockhead (Sunnyvale).

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BRIEFINGS AND DEMONSTRATIONSSCHEDULEDFebruary

17 February -- "Special High Contrast Reproduction". Sponsored by the CCB -- NPIC/CCB.  
(Objective: Duplicating Equipment and Emulsions)

March

17 March -- (1) "Techniques for Determining Color Values" -- NPIC  
(Objective: "High-Resolution Color Imagery Exploitation")  
  
(2) "Power Density Spectrum" -- NPIC  
(Objectives: a. Multi-Spectral Exploitation, b. Image Manipulation and Transmission)

RECOMMENDED FOR SCHEDULING

1. Status briefing on Near Real Time (EOI). Prognosis of exploitation systems.
2. Status briefing on Multispectral systems and effect upon exploitation equipment.
3. Status of Dry Process Film Reproduction -- non-silver and silver.
4. Special report on significant developments for FY 1971-72; a resume of R&D projects by [ ] Chairman, Technical Task Team. 25X1
5. Status of Very High Resolution Acquisition Materials.
6. Report on High Resolution Color Materials.
7. View/demonstration of the Digital Imagery Manipulation System -- NPIC.
8. View/demonstration of the Target Indexing Device -- NPIC.
9. Status report/viewing of the High Precision Stereo Comparator -- NPIC.
10. Value of Rear Projection Viewing for future film materials exploitation.

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- X 12. Impact of the "SENIOR LANCE" program (SLR) upon the exploitation community.

Apr Day

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